

ABSTRACT

U.S.-Canadian Academy of Pathology
Presented March 6, 1990
Boston, Mass.

Presentor: Warren Maltzman

A NON ISOTOPIC HYBRID CAPTURE ASSAY FOR HIV NUCLEIC ACID SEQUENCES. L.S. Lee, H. Payne, C.-Y. Ou, G. Schochetman, and W. Maltzman, Enzo Biochem, New York, NY. and Centers for Disease Control, Atlanta, GA.

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In experiments where enzymatically amplified HIV DNA, from either the gag or env regions, was the target, we were able to detect HIV DNA in all (36/36) samples from seropositive individuals. These results were in agreement with a radioactive "gel assay" performed in parallel on the same samples. The results of reconstruction experiments in which known amounts of HIV DNA were assayed in our nonradioactive system, suggest that application of this technology to the problem of detection of HIV in clinical samples might allow the identification of individuals who harbor low levels of HIV proviral or viral nucleic acid, e.g prior to seroconversion. To date, we have detected HIV DNA after amplification in 6/6 samples taken from individuals who were seronegative at the time of sampling, but who subsequently seroconverted.

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and Z. Jones, City University Medical College, Anywhere, AL and
People's Hospital, Somewhere, CA

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EPITOPE, D-14, IN BARRETT'S ESQ-
 AL ADENOCARCINOMA. JA Lapa MD* and
 *Naval Medical Center and *National
 , Maryland.
 as to evaluate the immunoperoxidase
 hageal adenocarcinoma (EA), dysplastic
) and non-dysplastic Barrett's epithe-
 out inflammatory atypia. In particu-
 monoclonal antibody D-14, which is
 specific CEA epitope expressed in colonic
 enocarcinoma. Four cases of EA, 4
 NBDE (intestinal-type) and 5 cases of
 stained by the avidin-biotin complex
 ized to D-14 (E-Z-EM), CEA (Dako),
 ceratins (Dako) and monoclonal low mo-
 (Becton-Dickinson, Boehringer-Mannheim
 . Intensity and pattern of staining
 nocarcinomas showed 1-3+ luminal and
 r D-14. Luminal staining (1-3+) was
 DBE and 6 of 9 cases of NBDE. Only
 plasmic staining for D-14 were seen in
 as, both NBDE. The other antibodies
 failed to demonstrate differentiating
 .cs. We conclude that EA shows strong
 with D-14, while DBE and NBDE do not.
 eria for EA are not met, but strong D-14
 is present, rebiopsy is recommended. The
 do not help to differentiate DBE from NBDE.

BREAST CARCINOMAS - A COMPARISON BETWEEN
IMAGE ANALYSIS AND FLOW CYTOMETRY
W.M. Hamilton, B. Kamat, G.J. Heatley, L. Cook,
Mc Medical Center, Burlington, MA., New
Hospital & Harvard Medical School, Boston, MA
itized image analysis (IA) and flow cytomet-
DNA ploidy of 30 invasive breast carcin-
un-stained slides of touch preparations and
cytospin preparations were analyzed with
alyzer (CAS, Elmhurst, IL). FCM, using the
alter, Hialeah, FL), was performed on disag-
stained with propidium iodide. The results
FCM as the standard. The DNA indices meas-
niques showed close correlation by linear
($R=0.964$, $p<0.001$). There were 16 (53%)
aneuploid tumors, the latter consisting of
2 (14%) tetraploid tumors, and 3 (21%)
aneuploid peaks. There was agreement be-
n 28 of 30 (93%) tumors. A trend was observed
and negative estrogen receptor expression,
ade and mitotic rate, and lymphatic-vascular
ired smaller tissue samples, and permitted
visualization and selection of tumor cells.
ferred better resolution and greater sensi-
the presence of multiple aneuploid peaks,
imation on the S-phase. Overall, the two
ed comparable results and were complementary
DNA ploidy of breast carcinomas.

327 EXPRESSION OF BLOOD GROUP ANTIGEN A (BGAA) EPITOPE ON
TUMOR CELLS: A FAVORABLE PROGNOSTIC FACTOR FOR SURGICALLY
RESECTED NON-SMALL CELL LUNG CANCER (NSCLC). J. Lee, J. Ro, A.
Sahin, W. Hittelman, B. Brown, C. Mountain, and W. Hong. M. D.
Anderson Cancer Center, Houston, TX
Previously, we reported that expression of epidermal growth
factor receptor (EGFR) in tumor cells, assessed by an anti-EGFR

RESECTED NON-SQUAMOUS CARCINOMA OF THE LUNG. Sahin, W. Hittelman, B. Brown, C. Mountain, Anderson Cancer Center, Houston, TX

Previously, we reported that expression of epidermal growth factor receptor (EGFR) on tumor cells, assessed by an anti-EGFR monoclonal antibody 29.1 and the ABC immunoperoxidase technique, is an important prognostic factor for patients (pts) with NSCLC (Proc ASCO 8:226,1989). However, this antibody was found to cross-react with the BGAA epitope which prompted us to examine the ABH blood group antigen expression on paraffin-embedded NSCLC tumor sections using monoclonal antibodies for blood group antigen A and B, and Ulex europaeus agglutinin I for H antigen. Of 164 pts, who survived at least one month after surgery, 61 pts had a blood type A, 20 type B, 73 type O, and 10 type AB; postsurgical stages were I in 68, II in 32, and III in 64 pts. Of 71 pts with blood type A or AB, 42 (59%) pts who had BGAA positive tumors survived significantly longer than the other 29 pts with BGAA negative tumors ($p < .001$) with a median survival of 70 and 15 months, respectively. This difference was independent of tumor stage, histologic grade, or cell types. In comparison, a median survival for 93 pts with blood type B or O was 39 months ($p = .047$). Expression of blood group antigen B or H on tumor cells, however, was not a significant prognostic factor. These data indicate that expression of BGAA epitope on tumor cells is an important prognostic factor for NSCLC and it might play an important role for the regulation of tumor growth.

328 A NON ISOTOPIC HYBRID CAPTURE ASSAY FOR HIV NUCLEIC ACID SEQUENCES. L.S. Lee, H. Payne, C.-Y. Ou, G. Schochetman, and W. Maltzman, Enzo Biochem, New York, NY. and Centers for Disease Control, Atlanta, GA.

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330 * PRIMARY MALIGNANT LYMPHO-
IMMUNOHISTOCHEMICAL AND
W. J. Lenington, J. Greer, H. Schwartz, R.
University Medical Center, Nashville, TN.
lymphomas of bor

Primary malignant lymphomas of bone presenting in bone with no evidence of soft tissue disease were reviewed. We reviewed 13 cases of primary ML of bone. There were 10 open biopsy in 9 patients and Craig need to 83 years of age with a male:female ratio of 1:2. On histological examination, 9 cases were categorized as diffuse large cell ML, 3 cases were small cell ML. Diagnosis was confirmed by positive immunohistochemistry in 3 cases and by positive immunohistochemistry in all 13 cases.

Paraffin sections in all cases immunoperoxidase panel: L-26, LN1, Leu 22 (pan-T cell markers); and immun and CD30 were added to the panel in cell ML, 1 small non-cleaved ML, and cell phenotypes (L-26, LN1, and/or LN1; were identified in 3 of the 8-cell ML features (1 case: UCHL +, Leu 22 +; 1 case: One T-cell ML was positive for CD15 or

In summary, most primary ML of and are at least intermediate grade, by immunohistochemistry; however, T-cell phenotypes and plastic embed wider variety of lymphoid antigens generally satisfactory in open biopsy; Craig needle biopsies. Decalcifica with paraffin immunoperoxidase de:

331 LARYNGEAL AMYLOIDOSIS: A
REVIEW. J. Lewis, P. Kurt
Rochester, MN.

We have reviewed the clinicopathology of 22 cases of laryngeal amyloid. There were 11 males and 11 females. The mean age was 65 years. Hoarseness was the most common symptom. Involvement of the false cords and concomitant tracheobronchial involvement were detected in one case. These lesions pre-

Grossly, these lesions presented as submucosal masses. Microscopically, the lesions were amorphous, eosinophilic material showing birefringence with the Congo red stain performed in 19 cases. Eighteen cases showed a positive Lambda light chain was detected. Immunohistochemical staining for IgG, IgA, IgM, kappa, and lambda light chains showed definite staining for IgG. Beta-2-microglobulin were negative. Plasma cells were always polyclonal. Independent review of the

Ten patients underwent re: disease. One patient died amyloidosis. In one case, a systemic amyloidosis or hemato: Laryngeal amyloidosis is a immunohistochemical studies a: patients do not develop plasm: usual clinical course is re: persistent or recurrent respi:

Abstract

Presented at US-Canadian Academy of Pathology Meeting
Boston, Massachusetts, March 1990

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L.S. Lee, H. Payne, C.-Y. Ou, G. Schochetman and W. Maltzman, Enzo Biochem, New York, NY and Centers for Disease Control, Atlanta, GA.

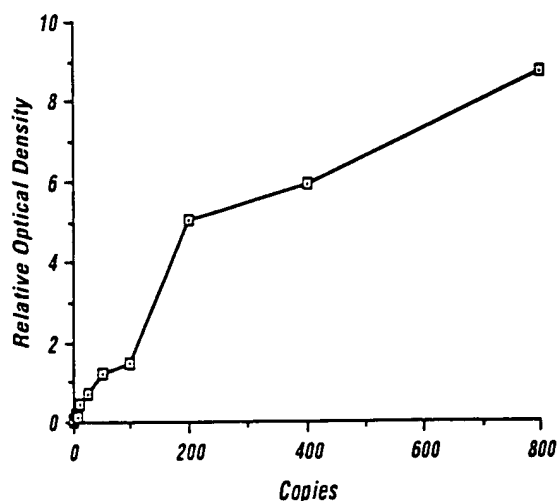
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Figure 2.

DETECTION OF HIV SEQUENCES IN AMPLIFIED SAMPLES OF CONTROL REACTIONS

| Sample | Copies | Relative Optical Density |
|--------|---------|--------------------------|
| 2393 | 800,000 | 93.45 |
| 2410 | 80,000 | 38.28 |
| 2398 | 8,000 | 15.38 |
| 2391 | 800 | 8.74 |
| 2390 | 400 | 5.91 |
| 2395 | 200 | 5.03 |
| 2400 | 100 | 1.44 |
| 2394 | 50 | 1.19 |
| 2403 | 25 | 0.682 |
| 2397 | 12.5 | 0.455 |
| 2399 | 6.25 | 0.104 |
| 2402 | 3.12 | 0.170 |
| 2392 | 1.56 | 0.038 |
| 2396 | 0.00 | 0.014 |
| water | 0.00 | 0.003 |



Samples represented 1 µg of human DNA which was amplified for 35 rounds in the presence of the indicated number of copies of cloned HIV DNA. Relative optical density was read at the termination of the detection reaction and normalized to 2 µl of the undiluted amplification reaction product. In all cases OD's of greater than 1.00 were based upon assays of diluted samples that gave OD readings between 0.1 and 1.0.